

31-983 KRAKOW, ul. Cementowa 8 phone.: (12) 683 79 00, fax: (12) 683 79 01 www.icimb.pl info\_krakow@icimb.pl





Total numbers of pages: 4		Test report no SB/361/14		Page 1 st
CUSTOMER/ MANUFACTURER	BAUWER Sp. z o.o., ul. Dojazo	d Staroniwa 9/19, 35-011 Rzeszóv	v	
AGREEMENT/ORDER NO	358/14/3SB/3LB06200	NO OF ISSUE	SB.510-85/14	
RESEARCH PROCEDURE /TEST M	ETHODS:	· ·		
PN-EN 1015-2:2000, PN-EN 1015-3:2000, P PN-EN 1015-9:2001/A1:2007, PN-EN 1015-1		이 집에 가는 사람들이 아니라 나는 사람들이 되었다. 그 사람들이 되었다면 하는 것이 없는 것이 없는 것이다.		
Registration number:	630/z/14			
Unique identification code of the product type:	BAUWER LIGHT			
Method of bulk sampling, person taking the sample, date and place of sampling (data in accordance with the manufacturer's statement):	September 5, 2014. Place of sampling: Product Store.	Customer according to PN-EN 1015-2: Adres: 36-062 Zaczernie 791. Samplireksandr Mishchuk. Batch number: PL1	ng certificate of September 5, 20	
Date of sample registration in the laboratory:	September 8, 2014			
Method of bulk sampling and storage of the sample before testing in ICiMB OSiMB laboratory in Cracow		(2 × 7 kg) of dry mortar. Because whole testing time the samples were s		
Preparation of the test mortars	and the particular amount of water together at low speed by electric m	to the following procedure: the whole (according to manufacturer's statementary till achieving the homogeneous could be it re-mixed. The samples were made	nt) was pured into it, next the all onsistency of mortar – app. 4 mi	components were mixed
Water/ dry mortar ratio	0,886, i.e. 6200 ml water per 7000	g of dry mortar		
Test conditions	Complied with the requirements de	etermined in above mentioned test me	hods.	

Tota	al numbers of pages: 4				Tes	st rep	ort no	SB/361/	14			Page 2 <sup>nd</sup>
TEST No.	RESULTS	erties		Ind	lication	n resi	ılts		Mean value ±	Test in accordance with	Testin beginning	g date
		2		3					tolerance*)	5	beginning	
1.	Consistence of fresh mortar, mm determined by flow table		128 128		128		129	128±4	PN-EN 1015-3:2000; PN-EN 1015-3:2000/ A1:2005; PN-EN 1015-3:2000/ A2:2007	08.09.2014		
2.	Bulk density of fresh mortar, kg/m <sup>3</sup>	determined by shock method		590			590		590±20	PN-EN 1015-6:2000; PN-EN 1015- 6:2000/A1:2007	08.09	.2014
3.		neral purpose mortar by a standard rod, min		415			415		415	PN-EN 1015-9:2001; PN-EN 1015-9:2001 /A1:2007	16.09	.2014
4.	Flexural strength of harden	ned mortar, N/mm²	0,3	5	0,3	35		0,40	0,4±0,2	PN-EN 1015-11:2001; PN-EN 1015-11:2001 /A1:2007 pt. 7.2.2	08.09.2014	06.10.2014
5.	Compressive strength of ha	ardened mortar, N/mm <sup>2</sup>	0,65	0,85	0,75	0,70	0,7	0,65	0,7±0,2	PN-EN 1015-11:2001; PN-EN 1015-11:2001 /A1:2007 pt. 7.2.2	08.09.2014	06.10.2014
6.	Adhesive strength, N/mm² And type of fracture pattern	n	>0,10 FP: B	>0,05 FP: A/I		,05 P: B	>0,10 FP: B	>0,10 FP: B		PN-EN 1015-12: 2002	08.09.2014	06.10.2014

Total numbers of pages: 4 Test report no SB/361/14 Page 3 rd

		ESULTS							Maan value 4	Test in	Testin	g date
No.		Properties			India	ation re	sults		Mean value ± tolerance*)	accordance with	beginning	ending
1		2				3			4	5		S
	ha	Water vapour permeability of hardened mortar with thickness d=0,02 m										
		Moisture permeability Λ, kg/m²•s•Pa	Higher	2,3811	2,3747	2,5785	2,2840	2,5677	2,4372		16.09.2014	30.10.2014
	А	Moisture transfer coefficient = Λ•d, kg/m•s•Pa	(saturated solution of KNO <sub>3</sub> )						0,04874			
7.		Moisture permeability coefficient, $\mu$	- NNO3)						4,0±1,5	PN-EN 1015-19: 2000; PN-EN 1015-19:		
		Moisture permeability Λ, kg/m²•s•Pa		1,3222	1,1772	1,1911	1,2642	1,2443	1,2398	2000/A1:2005		
	В	Moisture transfer coefficient = Λ•d, kg/m•s•Pa	Lower (saturated solution of LiCl)						0,0248		16.09.2014	30.10.2014
		Moisture permeability coefficient, $\mu$							7,8±1,5			

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Total numbers of pages: 4	Test report no SB/361/14	Page 4 <sup>th</sup>
")The given values of tolera	ce are extender tolerance, it was calculated for confidence level of 95% and coefficient of 2 and do not include the samplin	g step.
NOTE: Final test report.		
	Krakow, November 17, 2014	

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Zakladu Betonów, Zaprawi Kruszyw
Adiu,nki
Nejolu elowib
Dr inż. Marzena Najduchowska

Signature of entitled person

Zastepca Kierownika Zakładu Błonow, Zaprawli Kruszyw martne Jerzy Balacha



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Total numbers of pages: 4		Test report no SB/362/14		Page 1st
CUSTOMER/MANUFACTURER	BAUWER Sp. z o.o., ul. Dojaz	zd Staroniwa 9/19, 35-011 Rzeszóv	V	
AGREEMENT/ORDER NO	358/14/3SB/3LB06200	NO OF ISSUE	SB.510-85/14	
RESEARCH PROCEDURE/ TES	METHODS		· · · · · · · · · · · · · · · · · · ·	
	0, PN-EN 1015-3:2000/A1:2004, PN-EN 101 015-11:2001, PN-EN 1015-11:2001/A1:2007			5-9:2001,
Registration number:	631/z/14			
Unique identification code of the protype:	duct BAUWER STANDARD			
Method of bulk sampling, person taki the sample, date and place of sampli (data in accordance with the manufacturer's statement):	ng September 5, 2014. Place of sampling: Product Store.	Customer according to PN-EN 1015-2:  Adres: 36-062 Zaczernie 791. Samplin leksandr Mishchuk. Batch number: PL1	g certificate of September 5, 2014.	date of sampling
Date of sample registration in the laboratory:	September 8, 2014			
Method of bulk sampling and storage the sample before testing in ICiMB O laboratory in Krakow	SiMB Because of using the entirely who	× 11,5 kg ) of dry mortar. ble content of the package the archival samples were storaged in a dry place a		
Preparation of the test mortars	and the particular amount of wate together at low speed by electric	g to the following procedure: the whole or er (according to manufacturer's statement mixer till achieving the homogeneous co er it re-mixed. The samples were made it	nt) was pured into it, next the all componsistency of mortar – app. 4 min. After	onents were mixed
Water /dry mortar ratio	0,652, i.e. 7500 ml water per 115	00 g of dry mortar		
Test conditions	Complied with the requirements of	determined in above mentioned test met	hods.	

Bulk density of fresh

mortar, kg/m3

3.

Α

determined by shock

method

Workable life of general purpose mortar by

penetration of a standard rod, min

08.09.2014

08.09.2014

Total numbers of pages: 4 Test report no SB/362/14 Page 2<sup>nd</sup> **TEST RESULTS** Test in accordance Testing date Mean value ± No. **Properties** Indication results beginning ending tolerance\*) with 5 1 2 3 PN-EN 1015-3:2000: Consistence of fresh PN-EN 1015-3:2000/ determined by flow table 140 140 139 140 140±4 A1:2005: 08.09.2014 mortar, mm PN-EN 1015-3:2000/ A2:2007 PN-EN 1015-6:2000:

Flexural strength of hardened mortar, N/mm<sup>2</sup>

1,55

1,55

1,45

1,5±0,2

PN-EN 1015-11:2001
PN-EN 1015-11:2001
/A1:2007
pt. 7.2.2
PN-EN 1015-11:2001:

860

370

860±20

370

08.09.2014 4,20 3.70 3.55 06.10.2014 Compressive strength of hardened mortar, N/mm2 4.05 3,65 3.75 3.8±0.2 /A1:2007 pt. 7.2.2 Adhesive strength, N/mm<sup>2</sup> >0.30 >0.40 >0.35 >0.30 >0.50 >0,4±0,2 PN-EN 1015-12: 2002 08.09.2014 06.10.2014 FP: A/B FP: B And type of fracture pattern FP: B FP: B FP: A/B FP: B

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PN-EN 1015-

6:2000/A1:2007

PN-EN 1015-9:2001:

PN-EN 1015-9:2001

PN-EN 1015-11:2001

Page 3 rd Test report no SB/362/14 Total numbers of pages: 4 **TEST RESULTS** Testing date Test in Mean value ± **Properties** accordance Indication results No. beginning ending tolerance\*) with 3 1 1 2 Water vapour permeability of Hydroscopic hardened mortar with thickness range d=0,02 m Moisture permeability A, 2.0017 1,9598 1,9269 2,0079 2.1423 2,0077 kg/m2+s+Pa Higher 08.09.2014 06.11.2014 (saturated Moisture transfer coefficient = 0.04015 solution of A•d, kg/m•s•Pa KNO<sub>3</sub>) PN-EN 1015-19: Moisture permeability coefficient, 4,8±1,5 2000; PN-EN 7. 1015-19: 2000/A1:2005 Moisture permeability Λ, 0,8542 0,9006 0,8128 0.8554 0,8756 0.9552 kg/m2+s+Pa Lower (saturated Moisture transfer coefficient = solution of 0,01751 08.09.2014 06.11.2014 B Λ•d, kg/m•s•Pa LiCI) Moisture permeability coefficient 11,1±1,5 μ,

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Total numbers of pages: 4	Test report no SB/362/14	Page 4 <sup>th</sup>
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NOTE: Final test report.		
	Kraków, November 17, 2014	

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Total numbers of pages: 6		Te	est report no SB/363/14			Page 1st
CUSTOMER / MANUFACTUR	RER	BAUWER Sp. z o.o., ul. Dojazd S	taroniwa 9/19, 35-011 Rzeszóv	W		
AGREEMENT/ORDER NO		358/14/3SB/3LB06200	NO OF ISSUE		SB.510-85/14	75
RESEARCH PROCEDURE /7 PN-EN 1015-6:2000/A1:2007,PN-E PN-EN 1015-19: 2000; PN-EN 1015	N 1015-9:20	HODS PN-EN 1015-2:2000, PN-EN 101: 001, PN-EN 1015-9:2001/A1:2007, PN-EN 11:2005, PN-85/B-04500	5-3:2000, PN-EN 1015-3:2000/A1:200 I 1015-11:2001, PN-EN 1015-11:2001/	04, PN-EN 1015-3 /A1:2007; PN-EN	3:2000/A2:2007, PN-EN 10 N 1015-12: 2002, PN-EN 10	015-6:2000; 015-18:2003,
Registration number:		632/z/14				
Unique identification code of the type:	product	BAUWER PREMIUM				
Method of bulk sampling, person the sample, date and place of sa (data in accordance with the manufacturer's statement):		The bulk sample was sampled by Cus September 5, 2014. Place of sampling Person taking the bulk sample: Oleks	g: Product Store. Adres: 36-062 Za	czemie 791. Sa	1015-2:2000/A1:2007, d ampling certificate of Sep	ate of sampling stember 5, 2014.
Date of sample registration in the laboratory:	е	September 8, 2014				
Method of bulk sampling and sto the sample before testing in ICiN laboratory in Krakow		Customer has delivered 20 kg ( 2 × 10 Because of using the entirely whole conducting the whole testing time the same	ontent of the package the archival	sample was not at the temperatu	taken . ure of 20±2°C	
Preparation of the test mortars		Fresh mortar was made according to and the particular amount of water (actogether at low speed by electric mixed put away for about 5 min and after it is	ccording to manufacturer's stateme er till achieving the homogeneous c	ent) was pured in consistency of m	nto it, next the all compo nortar – app. 4 min. After	nents were mixed
Water /dry mortar ratio		0,4, i.e. 4000 ml water per 10000 g of	f dry mortar	CALL TO THE TOTAL		
Test conditions		Complied with the requirements deter	rmined in above mentioned test me	thods.		

Total numbers of pages: 6

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Page 2<sup>nd</sup>

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TEST	 - 5		18
ILO		ᄔ	10

M-		Desar	audia a		1	disstis		4-		Mean value ±	Test in accordance	Testin	g date
No.		Prop	erties				beginning	ending					
1			2		3					4	5	6	3
1.		nsistence of fresh rtar, mm	determined by flow table	120		122	122		121	121±4	PN-EN 1015-3:2000; PN-EN 1015-3:2000/ A1:2005; PN-EN 1015-3:2000/ A2:2007	08.09	.2014
2.		lk density of fresh rtar, kg/m <sup>3</sup>	determined by shock method		620			620		620±20	PN-EN 1015-6:2000; PN-EN 1015- 6:2000/A1:2007	08.09	.2014
3.	А	-	neral purpose mortar by a standard rod, min		502			522		512	PN-EN 1015-9:2001; PN-EN 1015-9:2001 /A1:2007	19.09	.2014
4.	Fle	xural strength of harder	ned mortar, N/mm <sup>2</sup>	1,	50	1,	65	1,	80	1,6±0,2	PN-EN 1015-11:2001; PN-EN 1015-11:2001 /A1:2007 pt. 7.2.2	08.09.2014	06.10.2014
5.	Cor	mpressive strength of h	ardened mortar, N/mm <sup>2</sup>	3,40	3,50	3,55	3,50	3,50	3,60	3,5±0,2	PN-EN 1015-11:2001; PN-EN 1015-11:2001 /A1:2007 pt. 7.2.2	08.09.2014	06.10.2014

Tota	al numbers of pages: 6				Tes	st rep	ort no S	B/363/1	4			Page 3 <sup>rd</sup>
TEST	RESULTS									T ('	Toolin	a doto
No.	Properties			Inc	dicatio	n res	ults		Mean value ± tolerance*)	Test in accordance with	beginning	g date ending
1	2				3	3			4	5		6
6.	Adhesive strength, N/mm² and type of fracture pattern		>0,90 FP: B	>0,95 FP: B			>0,90 FP: B	>0,65 FP: B	>0,8±0,4 FP: B	PN-EN 1015-12: 2002	08.09.2014	06.10.2014
7.	Water absorption coefficient due to capillary a hardened mortar, kg/m²	action of	0,75	0,70	0,80	0,75	5 0,70	0,80	0,7±0,7		08.09.2014	10.10.2014
8.	Penetration depth after the test of water absolute to capillary action, mm	orption	2	3	4	3	3	3	3	PN-EN 1015-18:2003	08.09.2014	10.10.2014

FormB-5/S-1 Department of Concrete, Mortars and Aggregates Test report no SB/363/14 Page 4<sup>th</sup> Total numbers of pages: 6 **TEST RESULTS** Testing date Test in Mean value ± **Properties** Indication results accordance No. beginning ending tolerance') with 3 4 5 6 1 2 Water vapour permeability of Hydroscopic hardened mortar with thickness range d=0.02 m Moisture permeability A, 1.2582 1.1632 1.1651 1.2331 1.2543 1,2148 kg/m2+s+Pa Higher 23.10.2014 19.09.2014 (saturated Moisture transfer coefficient = 0.02430 solution of Λ•d, kg/m•s•Pa KNO<sub>3</sub>) PN-EN 1015-19: Moisture permeability coefficient, 8,0±1,5 2000; PN-EN Ц 9. 1015-19: 2000/A1:2005 Moisture permeability A, 0,4418 0,5059 0,5031 0,5024 0.5080 0,4922 kg/m2+s+Pa Lower (saturated Moisture transfer coefficient = solution of 0,00984 23.10.2014 19.09.2014 Λ•d, kg/m•s•Pa LiCI) Moisture permeability coefficient

19,7±1,5

The test results apply to the test samples, only. Without consent of the research laboratory the test report cannot be copied in any other form but only entirely

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Total numbers of pages: 6

### Test report no SB/363/14

Page 5th

#### TEST RESULTS

						81 15 1981	0.0			Mean value ±	Test in	Testin	g date
lo.		Properti	es			Indicatio	n results			tolerance"	accordance with	beginning	ending
1		2					3			4	5	(	6
	Fre	eez-thaw resistance:		Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6				
	А	Mass of dried	before freez-thaw cycles	129,6	130,1	132,4	134,1	130,6	131,7				
	Α	samples exposed to freez-thaw test, g	after freez-thaw cycles	130,6	131,1	133,2	135,1	131,6	132,7				
		Percentage loss of ma	ass	no									
				Sample 7	Sample 8	Sample 9	Sample10	Sample11	Sample12				
	В	Mass of dried control	before soaking	129,4	131,7	131,2	131,5	130,8	132,4				
	В	freez-thaw test, g	after soaking	130,1	132,5	131,8	132,0	131,2	133,1				
10.		Percentage loss of ma	ass	no	PN-85/B-04500	08.09.2014	12.11.201						
10.		Flexural strength,	Samples not exposed to freez- thaw test	1,50	1,36	1,64	1,55	1,62	1,57	1,54			
	С	N/mm²	Samples exposed to freez-thaw test	1,50	1,52	1,52	1,50	1,48	1,50	1,50			
		Percentage loss of fle the samples, %	xural strength of							2,3			
	P tt	Compressive	Samples not exposed to freez-thaw test	2,94 3,31	3,56 3,38	3,06 3,31	3,44 3,06	3,44 3,19	3,69 3,31	3,31			
	D	strength, N/mm <sup>2</sup>	Samples exposed to freez- thaw test	3,19 3,13	3,31 3,44	2,81 3,06	3,00 3,44	3,19 2,94	3,44 3,50	3,20			
		Percentage loss of co of the samples, %	mpressive strength							3,3			

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*) The given values of tolerance a	re extender tolerance, it was calculated for confidence level of 95% and coefficient of 2 and do not include the samplir	ng step.
NOTE: Final test report.		
	Kraków, November 17, 2014	

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Total numbers of pages: 4		Page 1st					
CUSTOMER / MANUFACTURER	1						
AGREEMENT/ORDER NO	358/14/3SB/3LB06200	358/14/3SB/3LB06200 NO OF ISSUE SB					
RESEARCH PROCEDURE /TEST	METHODS:		·				
PN-EN 1015-2:2000, PN-EN 1015-3:2000 PN-EN 1015-9:2001/A1:2007, PN-EN 10	), PN-EN 1015-3:2000/A1:2004, PN-EN 101: 15-11:2001, PN-EN 1015-11:2001/A1:2007;	5-3:2000/A2:2007, PN-EN 1015-6:2000; P PN-EN 1015-12: 2002, PN-EN 1015-19: 2	N-EN 1015-6:2000/A1:2007, PN-EN 101: 000; PN-EN 1015-19: 2000/A1:2005,	5-9:2001,			
Registration number 633/z/14							
Unique identification code of the produtype:	BAUWER SZPACHLA	BAUWER SZPACHLA					
Method of bulk sampling, person taking the sample, date and place of sampling (data in accordance with the manufacturer's statement):	September 5, 2014. Place of sampling: Product Store.	Customer according to PN-EN 1015-2: Adres: 36-062 Zaczernie 791. Samplin eksandr Mishchuk. Batch number: PL1	g certificate of September 5, 2014.	date of sampling			
Date of sample registration in the laboratory:	September 8, 2014	September 8, 2014					
Method of bulk sampling and storage the sample before testing in ICiMB OS laboratory in Krakow	SiMB Because of using the entirely whole	Customer has delivered 30 kg ( 2 × 15 kg ) of dry mortar.  Because of using the entirely whole content of the package the archival sample was not taken .  During the whole testing time the samples were storaged in a dry place at the temperature of 20±2°C					
Preparation of the test mortars	Fresh mortar was made according to the following procedure: the whole content of the dry mortar package was added into the contain and the particular amount of water (according to manufacturer's statement) was pured into it, next the all components were mixed together at low speed by electric mixer till achieving the homogeneous consistency of mortar – app. 4 min. After that time the mortar value put away for about 5 min and after it re-mixed. The samples were made in presence of the Customer.						
Water /dry mortar ratio	0,367, i.e. 5500 ml water per 1500	0,367, i.e. 5500 ml water per 15000 g of dry mortar					
Test conditions	Complied with the requirements de	Complied with the requirements determined in above mentioned test methods.					

Total	numbers of pages: 4		Test report no SB/364/14									Page 2 <sup>nd</sup>
TEST	RESULTS										Toodin	
No.	Prop	perties		Indication results				Mean value ± tolerance')	Test in accordance with	Testing beginning	g date ending	
1		2	3			4	5	6				
1.	Consistence of fresh mortar, mm	determined by flow table	142 142 141 142		142±4	PN-EN 1015-3:2000; PN-EN 1015-3:2000/ A1:2005; PN-EN 1015-3:2000/ A2:2007	08.09.2014					
2.	Bulk density of fresh mortar, kg/m <sup>3</sup>	determined by shock method	1250		1260		1260±20	PN-EN 1015-6:2000; PN-EN 1015- 6:2000/A1:2007	08.09.2014			
3.	A Workable life of general purpose mortar by penetration of a standard rod, min		280			280			280	PN-EN 1015-9:2001; PN-EN 1015-9:2001 /A1:2007	24.09	.2014
4.	. Flexural strength of hardened mortar, N/mm²		2,10		2,	2,95 2,90		,90	2,7±1,0	PN-EN 1015-11:2001; PN-EN 1015-11:2001 /A1:2007 pt. 7.2.2	08.09.2014	06.10.2014
5.	5. Compressive strength of hardened mortar, N/mm <sup>2</sup>		13,40	14,15	12,45	13,75	13,10	12,95	13,3±2,1	PN-EN 1015-11:2001; PN-EN 1015-11:2001 /A1:2007 pt. 7.2.2	08.09.2014	06.10.2014
6.	Adhesive strength, N/mm² and type of fracture pattern		>0,80 FP: B	>0,75 FP: E			>0,75 FP: B	>0,75 FP: B	>0,7±0,4 FP: B	PN-EN 1015-12: 2002	08.09.2014	06.10.2014

Total numbers of pages: 4 Test report no SB/364/14 Page 3<sup>rd</sup>

	T	ESULTS							Test in	Testing date		
No.	Properties		Indication results					Mean value ± tolerance')	accordance with	beginning	ending	
1		2		3 4				4	5	6		
	Water vapour permeability of hardened mortar with thickness d=0,02 m		Hydroscopic range									
		Moisture permeability Λ, kg/m²•s•Pa	Higher (saturated solution of KNO <sub>3</sub> )	0,8713	0,8963	0,8508	0,9205	0,8813	0,8840		08.09.2014	15.11.2014
	А	Moisture transfer coefficient = ^•d, kg/m•s•Pa		0,01768						PN-EN 1015-19: 2000; PN-EN 1015-19:	00.03.2014	15.11.2014
7.		Moisture permeability coefficient, µ	1,1103	11,0±1,5								
		Moisture permeability Λ, kg/m²•s•Pa	Lower (saturated solution of LiCl)	0,3686	0,3734	0,3400	0,3516	0,3529	0,3573	2000/A1:2005		
	В	Moisture transfer coefficient = ^•d, kg/m•s•Pa		0,00715							08.09.2014	15.11.2014
		Moisture permeability coefficient, $\mu$							27,1±1,5			

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*) The given values of tolera	nce are extender tolerance, it was calculated for confidence level of 95% and coefficient of 2 and do not include the sampling	g step.
NOTE: Final test report.		
	Kraków, November 17, 2014	

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Signature of entitled person



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Total numbers of pages: 3	Test report	no SB/368/14			Page 1st		
CUSTOMER / MANUFACTURER	BAUWER Sp. z o.o., ul. Dojazd Staroniw	a 9/19, 35-011 Rzeszóv	v				
AGREEMENT/ORDER NO	358/14/3SB/3LB06200 NO OF ISSUE SB.510-85/14						
RESEARCH PROCEDURE /TEST M	THODS: PN-EN 13454-2+A1:2008, PN-EN	13892-2 :2004, PN-EN 1	3892-8:2004				
Registration number: 634/z/14							
Unique identification code of the product type:	duct BAUWER FLOOR						
Method of bulk sampling, person taking the sample, date and place of sampling (data in accordance with the manufacturer's statement):	date and place of sampling ordance with the September 5, 2014. September 5, 2014. Place of sampling: Product Store. Adres: 36-062 Zaczernie 791. Sampling certificate of September 5, 2014.						
Date of sample registration in the laboratory:	September 8, 2014						
Method of bulk sampling and storage of the sample before testing in ICiMB OSiM laboratory in Krakow	Customer has delivered 24 kg ( 2 × 12 kg ) of d Because of using the entirely whole content of During the whole testing time the samples were	the package the archival s					
Preparation of the test mortars	Fresh mortar was made according to the following procedure: the whole content of the dry mortar package was added into the contain and the particular amount of water (according to manufacturer's statement) was pured into it, next the all components were mixed together at low speed by electric mixer till achieving the homogeneous consistency of mortar – app. 4 min. After that time the mortar v put away for about 5 min and after it re-mixed. The samples were made in presence of the Customer.						
Water /dry mortar ratio	0,875, i.e. 10500 ml water per 12000 g of dry mortar						
Test conditions	litions Complied with the requirements determined in above mentioned test methods.						

Page 2<sup>nd</sup> Total numbers of pages: 3 Test report no SB/368/14 **TEST RESULTS** Test in Testing date Mean value ± No. **Properties** Indication results accordance tolerance\*) beginning ending with 6 2 3 4 5 1 PN-EN 13454-Consistence 08.09.2014 determined by flow table, 175 174 176 175 175 2+A1:2008 1. of fresh flow in mm mortar: p. 4.4.2.2.2 Test was conducted by S. Nagieć Sample - prism 1 2 3 Flexural and Sample density, 0.416 0.417 08.09.2014 06.10.2014 compressive 0.413 a/cm3 PN-EN strength of 13892-2:2004 hardened mortar 0.80 0.85 0.95 Flexural strength, N/mm2(1)  $0.9 \pm 0.5$ . N/mm<sup>2</sup> Compressive strength of 1,85 1,75 1,90 1.75 1,80 1,90 1,8±1,0 Test was conducted by J. Balacha hardened mortar, N/mm2,(2) Sample 5 3 08.09.2014 06.10.2014 Bond strength, N/mm2 0.05 0.05 0.05 0,05 0,05 0,05 PN-EN Bond strength (3) 3. X/Y 13892-8:2004 X/Y X/Y Type of fracture pattern (4) X/Y XY X/Y Test was conducted by J. Balacha The test results apply to the test samples, only. Without consent of the research laboratory the test report cannot be copied in any other form but only entirely.

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The given values of tolerance are extender tolerance, it was calculated for confidence level of 95% and coefficient of 2 and do not include the sampling step.

#### NOTES:

- <sup>1</sup> performed by using the compressive machine Matest no ST-8000287; measuring ranges 0-10 kN, Calibration certificate issued of July 28, 2014 by Calibration Laboratory APLAB Sp. z o.o. in Gdynia; accreditation no: AP072; certificate no: 389.8/2014.
- <sup>2</sup> performed by using the compressive machine Matest no ST-8000287; measuring ranges 0-250 kN, Calibration certificate issued of July 28, 2014 by Calibration Laboratory APLAB Sp. z o.o. in Gdynia; accreditation no: AP072; certificate no: 389.8/2014.
- <sup>3</sup> performed by using the digital PULL-OFF strength tester no 006/01; measuring ranges 0-15 kN, Calibration certificate issued of July 28, 2014 by Calibration Laboratory APLAB Sp. z o.o. in Gdynia; accreditation no: AP072; certificate no: 389.3/2014.
- <sup>4</sup> x/y fracture at the interface between the mortar and substrate

Final test report

Kraków, November 17, 2014

Signature of verifying person

Kierownik Zakładu Betonów, Zapraw i Kruszyw

Najduelouse Dr inż. Marzena Najduchowska Signature of entitled person

Zasternoa Kerownika Zakładu Batorow, Zaprzw i Kruszyn

mgr ing. Jerzy Balacha